

APPENDIX A

1. A computer system including plural client nodes communicating data access requests to one or more storage nodes, comprising:
 - logic means for associating one or more of the data access requests with respective priorities, wherein the priorities include time-based deadlines;
 - logic means for sending the data access requests and priorities to the storage nodes; and
 - logic means for ordering the data access requests at the storage nodes based on the respective priorities, such that the data access requests are satisfied in consideration of their respective priorities.
3. The system of Claim 1, further comprising:
 - logic means for terminating at least one data access request.
4. The system of Claim 1, further comprising means for loosely synchronizing the computing and storage nodes with each other.
5. The system of Claim 1, wherein each storage node includes at least one storage computer and at least one data storage device, and the storage computer includes logic means for sending no more than one data access request at a time to the data storage device, such that the data storage device cannot reorder the sequence of responding to data access requests based on considerations internal to the data storage device.
6. The system of Claim 1, wherein the system is a virtual shared disk system.
8. In a computer system having plural processors communicating data access requests to a shared storage system, a computer-implemented method for satisfying at least two contemporaneous data access requests to a single data storage device of the shared storage system, comprising the steps of:
 - responding to the requests in an order defined at least in part by one or more considerations external to the data storage device, wherein the one or more considerations external to the data storage device include a data request priority including a time-based deadline.
11. The method of Claim 8, further comprising:
 - associating one or more of the data access requests with respective priorities;
 - sending the data access requests and priorities to storage nodes in the shared storage system, each storage node including at least one data storage device; and
 - ordering the data access requests at the storage nodes based on the respective priorities, such that the data access requests are satisfied in accordance with their respective priorities.
12. The method of Claim 11, further comprising:
 - changing a priority of at least one data access request, prior to the request being satisfied by a storage node, to render an updated priority; and

- reordering data access requests at the storage nodes, based on the updated priority.
13. The method of Claim 8, further comprising:
terminating at least one data access request, prior to the request being satisfied by a storage node.
14. The method of Claim 8, further comprising loosely synchronizing the computing and storage nodes with each other.
16. The method of Claim 8, wherein the system is a virtual shared disk system.
17. A computer program device comprising:
a computer program storage device readable by a digital processing apparatus; and
a program means on the program storage device and including instructions executable by the digital processing apparatus for performing method steps for satisfying one or more data access requests, the method steps comprising:
associating at least some of the data access requests with respective priorities, at least some of which are time-based; and
sending the priorities and the data access requests to a shared storage system, such that the shared storage system can respond to the requests in consideration of the priorities.
18. The computer program device of Claim 17, wherein the shared storage system is a virtual shared disk system and at least some of the priorities are time-based deadlines.
20. The computer program device of Claim 19, wherein the method steps further comprise:
terminating at least one data access request, prior to the request being satisfied by the shared storage system.
21. The computer program device of Claim 17, wherein the method steps further comprise loosely synchronizing the data access requests with each other.
22. A computer program device comprising:
a computer program storage device readable by a digital processing apparatus; and
a program means on the program storage device and including instructions executable by the digital processing apparatus for performing method steps for satisfying one or more data access requests, the method steps comprising:
responding, with a memory system, to at least some of the data access requests based on respective priorities, the priorities and the data access requests being sent to the memory system, wherein at least some priorities are time-based.